

In the Claims

a1 Claim 1 (Currently Amended) A braking system for use within a hybrid electric vehicle of the type having a driveline which selectively and rotatably drives a pair of wheels, said braking system comprising:

an engine which is adapted to selectively provide a first torque to said driveline;

a first clutch which is adapted to selectively disconnect said engine from said driveline;

a transaxle assembly which is adapted to selectively provide a negative torque to said driveline effective to recover energy during certain braking events; and

a control system which controls said first clutch and which selectively disengages said first clutch during said certain braking events, effective to disconnect said engine from said driveline during said certain braking events, thereby increasing said recovered energy[[]].

with said vehicle further including an accelerator pedal, and wherein said control system is further effective to selectively disengage said first clutch based upon a position of said accelerator pedal and to cause said transaxle assembly to provide a simulated compression braking force to said driveline based upon said position of said accelerator pedal.

Claim 2 (Cancelled)

Claim 3 (Original) The braking system of claim 1 further comprising:

a hydraulic braking system which selectively provides a friction braking force to said vehicle; and

wherein said control system is further effective to control said regenerative torque and said friction braking force based upon at least one vehicle attribute.

Claim 4 (Currently Amended) The braking system of claim 3 wherein said transaxle assembly comprises a motor/generator, and wherein said at least one vehicle attribute comprises a rotational speed of said motor/generator.

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Claim 5 (Currently Amended) The braking system of claim 4 wherein said control system is effective to reduce said regenerative braking force ~~as-said~~ in the event that the speed of said vehicle decreases below a predetermined value.

Claim 6 (Original) The braking system of claim 5 wherein said regenerative braking force is reduced linearly as said speed of said vehicle decreases below said predetermined value.

Claim 7 (Original) The braking system of claim 3 wherein said at least one vehicle attribute comprises a master cylinder pressure.

Claim 8 (Original) The braking system of claim 3 wherein said at least one vehicle attribute further comprises a state-of-charge of said battery.

Claims 9 – 13 (Cancelled)

Claim 14 (Currently Amended) A method of providing regenerative braking within a vehicle including an engine and a transaxle assembly which are selectively connected to a driveline, said method comprising the steps of:
sensing a braking event;
sensing an accelerator pedal position;
causing said transaxle to provide a regenerative braking torque to said driveline, effective to generate an amount of energy; and
selectively disconnecting said engine from said driveline based upon said accelerator pedal position, during said braking event, effective to increase the amount of energy generated during said braking event~~[[.]]~~, and with said regenerative braking torque having a value based at least in part upon the position of said accelerator pedal.

Claim 15 (Cancelled)

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Claim 16 (Currently Amended) The method of claim 14 further comprising the steps of:

selectively disconnecting said engine from said driveline based upon said accelerator position when said vehicle is operating in a hybrid drive mode, and causing said transaxle assembly to provide a regenerative braking torque having a value effective to simulate an engine compression braking force.

Claim 17 (Original) The method of claim 16 wherein said vehicle further includes a battery, said method further comprising the steps of:
determining a state-of-charge of said battery; and
performing compression braking with said engine when said state-of-charge of said battery is full.

Claims 18 – 19 (Cancelled)
